

RECREATIONAL INTERPRETATIONS  
Wells County, North Dakota

The soils of the survey area are rated in the following tables according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in this table can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas.

The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

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Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

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RECREATION DEVELOPMENT--Continued  
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(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
ArA: ARVILLA-----	Slight	Slight	Slight	Slight	Moderate: droughty
ArB: ARVILLA-----	Slight	Slight	Moderate: slope	Slight	Moderate: droughty
BaC: BARNES-----	Slight	Slight	Severe: slope	Slight	Slight
BaC2: BARNES-----	Slight	Slight	Severe: slope	Slight	Slight
BbD: BARNES-----	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: slope
BUSE-----	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: slope
Be: BARNES-----	Slight	Slight	Severe: slope	Slight	Moderate: large stones
BnA: BARNES-----	Slight	Slight	Moderate: small stones	Slight	Slight
SVEA-----	Slight	Slight	Moderate: small stones	Slight	Slight
BnB: BARNES-----	Slight	Slight	Moderate: slope small stones	Slight	Slight
SVEA-----	Slight	Slight	Moderate: slope small stones	Slight	Slight
Bp: BEARDEN-----	Moderate: wetness	Moderate: percs slowly wetness	Moderate: wetness	Moderate: wetness	Moderate: wetness
PERELLA-----	Moderate: percs slowly wetness	Moderate: percs slowly wetness	Moderate: percs slowly wetness	Slight	Slight
Br: BENOIT-----	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
Bt: BENOIT-----	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding
Bu: BORUP-----	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
BvE: BUSE-----	Severe: slope	Severe: slope	Severe: slope	Moderate: slope	Severe: slope

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Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
BARNES-----	Severe: slope	Severe: slope	Severe: slope	Moderate: slope	Severe: slope
Ca: LAMOURE-----	Severe: flooding wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
COLVIN-----	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
Cp: COLVIN-----	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
LAPRAIRIE-----	Severe: flooding	Slight	Moderate: flooding	Slight	Moderate: flooding
Cs: COLVIN-----	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding
Dc: DIMMICK-----	Severe: too clayey ponding	Severe: too clayey ponding	Severe: too clayey ponding	Severe: too clayey ponding	Severe: too clayey ponding
Dd: DIVIDE-----	Moderate: percs slowly wetness	Moderate: percs slowly wetness	Moderate: percs slowly wetness	Moderate: wetness	Moderate: wetness
Dp: DUMPS-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
PITS-----	Severe: slope small stones	Severe: slope too sandy	Severe: slope small stones	Severe: slope too sandy	Severe: slope small stones droughty
EdC: EGELAND-----	Slight	Slight	Severe: slope	Slight	Slight
EeB: EGELAND-----	Slight	Slight	Moderate: slope	Slight	Slight
EMBDEN-----	Slight	Slight	Moderate: slope	Slight	Slight
Efb: EGELAND-----	Slight	Slight	Moderate: slope	Slight	Slight
EMBDEN-----	Slight	Slight	Moderate: slope	Slight	Slight
Ega: EMBDEN-----	Slight	Slight	Slight	Slight	Slight
EGELAND-----	Slight	Slight	Slight	Slight	Slight
Ela: EMBDEN-----	Slight	Slight	Slight	Slight	Slight

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Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
EGELAND-----	Slight	Slight	Slight	Slight	Slight
Em: EMRICK-----	Slight	Slight	Slight	Slight	Slight
LARSON-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
Er: ERODED SANDY LAND-----	Moderate: too sandy	Moderate: too sandy	Moderate: slope too sandy	Moderate: too sandy	Moderate: droughty
Ex: EXLINE-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Moderate: wetness	Severe: excess sodium
Fa: FARGO-----	Severe: too clayey wetness	Severe: too clayey wetness	Severe: too clayey wetness	Severe: too clayey wetness	Severe: too clayey wetness
ABERDEEN-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
Fc: FARGO-----	Severe: too clayey wetness	Severe: too clayey wetness	Severe: too clayey wetness	Severe: too clayey wetness	Severe: too clayey wetness
FoA: FORMAN-----	Slight	Slight	Slight	Slight	Slight
FoB: FORMAN-----	Slight	Slight	Moderate: slope	Slight	Slight
Fr: FRAM-----	Moderate: wetness	Moderate: wetness	Moderate: wetness	Moderate: wetness	Moderate: wetness
Ge: GARDENA-----	Slight	Slight	Slight	Slight	Slight
ECKMAN-----	Slight	Slight	Slight	Slight	Slight
Ha: HAMERLY-----	Moderate: percs slowly wetness	Moderate: percs slowly wetness	Moderate: percs slowly wetness	Moderate: wetness	Moderate: wetness
Hd: HECLA-----	Moderate: too sandy	Moderate: too sandy	Moderate: too sandy	Moderate: too sandy	Moderate: droughty
MADDOCK-----	Moderate: too sandy	Moderate: too sandy	Moderate: too sandy	Moderate: too sandy	Moderate: droughty
HeA: HEIMDAL-----	Slight	Slight	Slight	Slight	Slight
EMRICK-----	Slight	Slight	Slight	Slight	Slight
HeB: HEIMDAL-----	Slight	Slight	Moderate: slope	Slight	Slight

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Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
EMRICK-----	Slight	Slight	Moderate: slope	Slight	Slight
HlB: HEIMDAL-----	Slight	Slight	Moderate: slope	Slight	Slight
LARSON-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
Hr: HARRIET-----	Severe: flooding percs slowly wetness	Severe: excess sodium percs slowly wetness	Severe: percs slowly wetness	Severe: wetness	Severe: excess sodium wetness
LaA: LADELLE-----	Slight	Slight	Slight	Slight	Slight
LaB: LADELLE-----	Slight	Slight	Moderate: slope	Slight	Slight
Ld: CHANNEL-----	---	---	---	---	---
LAMOURE-----	Severe: flooding wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
DIVIDE-----	Slight	Slight	Slight	Slight	Slight
Le: LAMOURE-----	Severe: flooding wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
EXLINE-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Moderate: wetness	Severe: excess sodium
LhB: LARSON-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
HEIMDAL-----	Slight	Slight	Moderate: slope	Slight	Slight
Lm: LARSON-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
MIRANDA-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
Ln: LETCHER-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
Lo: WAMDUSKA-----	Moderate: too sandy	Moderate: too sandy	Moderate: slope too sandy	Moderate: too sandy	Severe: droughty
MAUVAIS-----	Severe: flooding wetness	Moderate: excess salt wetness	Severe: wetness	Moderate: wetness	Moderate: excess salt wetness

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Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
M-W: MISCELLANEOUS WATER-----	---	---	---	---	---
Mr: MIRANDA-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
LARSON-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
Nu: NUTLEY-----	Moderate: too clayey	Moderate: too clayey	Moderate: too clayey	Moderate: too clayey	Severe: too clayey
Ov: OVERLY-----	Slight	Slight	Slight	Slight	Slight
Pa: PARNELL-----	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding
Pd: PITS, SAND AND GRAVEL-----	Severe:  slope small stones	Severe:  slope too sandy	Severe:  slope small stones	Severe:  slope too sandy	Severe:  slope small stones droughty
ReA: RENSHAW-----	Slight	Slight	Slight	Slight	Moderate: droughty
ReB: RENSHAW-----	Slight	Slight	Moderate: slope	Slight	Moderate: droughty
Sa: EASBY-----	Severe: excess salt wetness	Severe: excess salt wetness	Severe: excess salt wetness	Severe: wetness	Severe: excess salt wetness
So: SIOUX-----	Slight	Slight	Moderate: slope small stones	Slight	Severe: droughty
ARVILLA-----	Slight	Slight	Moderate: slope	Slight	Moderate: droughty
Sr: SIOUX-----	Moderate: slope small stones	Moderate: slope small stones	Severe: large stones slope small stones	Severe: large stones	Severe: large stones droughty
BARNES-----	Moderate: slope	Moderate: slope	Severe: large stones slope	Slight	Moderate: large stones slope
St: Larson-----	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium large stones	Moderate: large stones	Severe: excess sodium large stones

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Lowe-----	Severe: flooding wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
Su: SOUTHAM SOILS---	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding
To: TONKA-----	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding
Uh: ULEN-----	Slight	Slight	Slight	Slight	Moderate: droughty
HAMAR-----	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: wetness droughty
Va: VALLERS-----	Severe: wetness	Moderate: percs slowly wetness	Severe: wetness	Moderate: wetness	Moderate: wetness

